

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
30 October 2003 (30.10.2003)

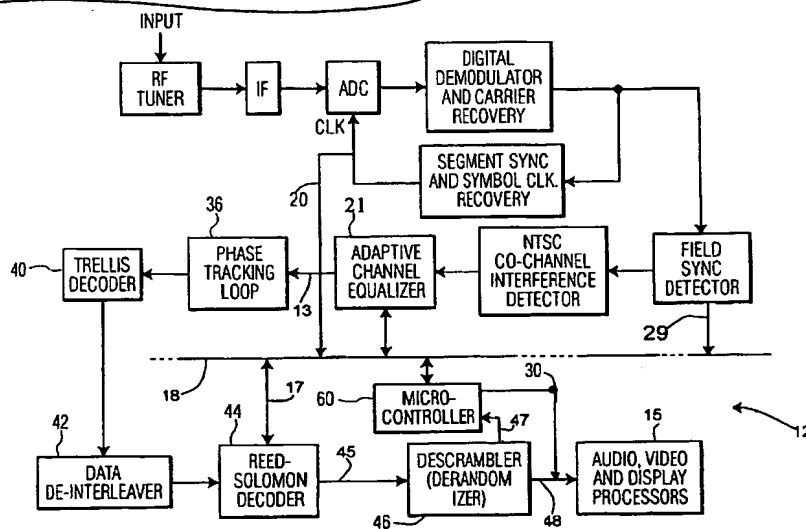
PCT

(10) International Publication Number
WO 03/090440 A2

- (51) International Patent Classification⁷: **H04N**
- (21) International Application Number: **PCT/US03/11001**
- (22) International Filing Date: **11 April 2003 (11.04.2003)**
- (25) Filing Language: **English**
- (26) Publication Language: **English**
- (30) Priority Data:
60/373,203 **17 April 2002 (17.04.2002)** **US**
- (71) Applicant (for all designated States except US): **THOMSON LICENSING S.A. [FR/FR]; 46, Quai A. Le Gallo, F-92648 Boulogne (FR).**
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **BOUILLET, Aaron, Reel [US/US]; 1520 Persimmon Place, Noblesville, IN 46060 (US). MAYER, Matthew, Thomas [US/US]; 8262 Forest Lane, Indianapolis, IN 46240 (US).**
- (74) Agents: **TRIPOLI, Joseph, S. et al.; c/o Thomson Licensing Inc., 2 Independence Way - Suite 2, Princeton, NJ 08540 (US).**
- (81) Designated States (national): **AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.**
- (84) Designated States (regional): **ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).**
- Published:**
— without international search report and to be republished upon receipt of that report

[Continued on next page]

(54) Title: **PACKET ERROR SIGNAL GENERATOR**



(57) Abstract: A software packet error system for use with a High Definition Television (HDTV) receiver (12). A data packet error signal (17) is transferred from a forward error correcting Reed-Solomon decoder (44) to a transport processor (60). In response to a segment sync signal (20), the transport processor generates an error signal (31) which appears on a programmable output pin (30). The software packet error signal (31) is synchronized with the outgoing data packet signal (32) such that each data packet (35) is bracketed or framed by its associated packet error signal (33). Precession of the start of the data packets forwarded on the transport bus (48) relative to the start of the data packets appearing at the output (45) of the decoder (44) occurs as a result of a training packet generated for every 312 data packets. The precession is reset at the beginning of every field and is predictable across the duration of a field with sufficient accuracy to make the software packet error mechanism feasible.